What is Claimed Is:

1. A method of depositing metallic film layers on a substrate, comprising:

introducing a first gas into a vacuum chamber proximate a sputtering target disposed inside the vacuum chamber;

applying power to the sputtering target and a coil disposed between the sputtering target and the substrate in the presence of only the first gas; and

introducing a second gas into the chamber proximate a surface of the substrate.

2. The method of claim 1, further comprising biasing the substrate and the coil.

3. The method of claim 1, wherein the second gas is introduced proximate an upper surface of the substrate.

4. The method of claim 1, wherein the power is applied to the sputtering target and the coil to initiate plasma.

5. The method of claim 1, wherein the second gas is introduced in a metallic deposition step.

6. The method of claim 1, wherein the first gas is introduced in a gas stabilization step.

7. The method of claim 1, wherein the power is applied to the sputtering target and the coil in a power ramp step.

8. The method of claim 1, wherein the first gas is argon.

9. The method of claim 1, wherein the second gas is nitrogen.

10. The method of claim 1, wherein the first gas is inert.

11. The method of claim 1, wherein the second gas is active.

12. The method of claim 1, wherein the second gas is introduced after the power is applied to the sputtering target and the coil.

13. The method of claim 1, wherein the sputtering target is made of a material selected from a group consisting of titanium, tantalum and tungsten.

14. The method of claim 1, wherein the coil is made of a material selected from a group consisting of titanium, tantalum and tungsten.

15. The method of claim 1, wherein introducing the first gas into the vacuum chamber proximate the sputtering target comprises creating a higher partial pressure of the first gas proximate the sputtering target than at the upper surface of the substrate.

16. The method of claim 1, wherein introducing the second gas into the chamber proximate the upper surface of the substrate comprises creating a higher partial pressure of the second gas proximate the upper surface of the substrate than at the sputtering target.

17. The method of claim 1, wherein introducing the second gas into the chamber proximate the upper surface of the substrate comprises:

creating a gap between a shield ring and a shield support member when the shield ring is supported by a substrate support member, wherein the shield ring, the shield support member and the substrate support member are disposed inside the vacuum chamber; and

introducing the second gas through the gap to the upper surface of the substrate.

18. The method of claim 1, wherein introducing the second gas into the chamber proximate the upper surface of the substrate comprises introducing the second gas through an inlet port centrally disposed through a substrate support member configured to support the substrate.

19. A method of depositing metallic film layers on a substrate, comprising:

creating a higher partial pressure of an inert gas inside a vacuum chamber proximate a sputtering target disposed therein than at an upper surface of the substrate;

initiating a plasma within the chamber; and

creating a higher partial pressure of an active gas proximate the upper surface of the substrate than at the sputtering target.

20. The method of claim 19, further comprising biasing a coil and the substrate, wherein the coil is disposed between the sputtering target and the substrate.

21. The method of claim 19, wherein the inert gas is argon and the active gas is nitrogen.

22. The method of claim 19, wherein the sputtering target is made of a material selected from a group consisting of titanium, tantalum and tungsten.

23. The method of claim 19, wherein the coil is made of a material selected from a group consisting of titanium, tantalum and tungsten.

24. The method of claim 19, wherein creating the higher partial pressure of the active gas proximate the upper surface of the substrate comprises:

creating a gap between a shield ring and a shield support member when the shield ring is supported by a substrate support member, wherein the shield ring, the

shield support member and the substrate support member are disposed inside the vacuum chamber; and

introducing the active gas through the gap to the upper surface of the substrate.

25. The method of claim 19, wherein creating the higher partial pressure of the active gas proximate the upper surface of the substrate comprises introducing the active gas through an inlet port centrally disposed through a substrate support member configured to support the substrate.

26. The method of claim 19, wherein initiating the plasma comprises applying power to the sputtering target and the coil in the presence of only the inert gas.

27. A method of depositing metallic film layers on a substrate, comprising:

creating a higher partial pressure of argon inside a vacuum chamber proximate a sputtering target disposed therein than at an upper surface of the substrate, wherein the sputtering target is made of a material selected from a group consisting of titanium, tantalum and tungsten;

applying power to the sputtering target and a coil disposed between the sputtering target and the substrate, wherein the coil is made of a material selected from a group consisting of titanium, tantalum and tungsten;

creating a higher partial pressure of nitrogen proximate the upper surface of the substrate than at the sputtering target; and

biasing the coil and the substrate.

28. A method of depositing metallic film layers on a substrate, comprising:

introducing a gas mixture into a vacuum chamber proximate a sputtering target disposed inside the vacuum chamber;

applying power to the sputtering target and a coil disposed between the sputtering target and the substrate; and

introducing a second gas into the chamber proximate an upper surface of the substrate.

29. The method of claim 28, wherein the gas mixture comprises argon and nitrogen, and the second gas comprises nitrogen.

30. The method of claim 28, further comprising biasing the substrate and the coil.

31. The method of claim 28, wherein the coil is made of a material selected from a group consisting of titanium, tantalum and tungsten.

32. The method of claim 28, wherein the sputtering target is made of a material selected from a group consisting of titanium, tantalum and tungsten.